Selected Ratios and Definitions
(standard definitions; most formulas use the notations from the Berk, DeMarzo, Harford book)

Current Ratio = Current Assets / Current Liabilities;
Quick Ratio = (Current Assets - Inventory) / Current Liabilities;
Debt-to-Asset Ratio = Total Debt / Total Assets; Debt-to-value ratio = D/(E+D)
Debt-to-Equity = Total Debt / Total Equity;
Equity Multiplier = Total Assets / Total Equity;
Times Interest Earned = EBIT / Interest Payment;
Interest Coverage Ratio = Some Measure of Earnings / Interest;
Inventory Turnover = COGS / Inventory; or, Sales/Average Inventory if COGS data is not available;
Average Age of Inventory = 365 / Inventory Turnover = 365 / (Sales / Inventory);
Receivables Turnover = Annual Sales / Accounts Receivables;
Average Collection Period = 365 / Receivables Turnover = 365 / (Sales / Accounts Receivables);
Total Assets Turnover = Sales / Total Assets;
Net Profit Margin = Net Income / Sales;
ROA = Net Income / Total Assets = total asset turnover * net profit margin;
ROE = Net Income / Equity = ROA * Equity Multiplier = ROA * Total Assets / Equity;
ROE = total asset turnover * net profit margin * equity multiplier;

EPS = Net Income / Number of Common Shares Outstanding;
P/E Ratio = Market Price per Share / EPS;
Market-to-Book Ratio = Market Price per Share / Book Value per Share
Market-to-Book Ratio = Total Market Value of Equity / Total Book Value of Equity;
Dividend Payout Ratio (DPR) = Dividends / Net Income;
Retention Ratio = 1 - Dividend Payout Ratio;

Net Cash Flow = Net Income + Depreciation;
Operating Cash Flow (OCF) = Earnings before Interest and Taxes + Depreciation - Tax;
Free Cash Flow (FCF) = [EBIT x (1- Tax Rate)] + Depreciation – CAPEX – Change in NWC

Dividend Yield = Dividend per Share / Stock Price = Div1 / P0
Capital Gain Rate = (Price Next Period / Price today) – 1 = (P1 / P0) - 1 = (P1 - P0) / P0
Holding Period Return: HPR = Div1/P0 + (P1/P0 -1)
Value of a perpetuity: P = C / r where C is the perpetual cash flow and r is the discount rate
Constant Growth Model: P = Div1 / (rE - g) where Div1 is the next period dividend, rE is the equity cost of capital and g is the growth rate in dividend.

Cost of Preferred Stock Capital; r_p = (Div_p / P_p); Cost of Common Equity Capital; r_E = (Div_E / P_E) + g; or
Security Market Line, SML or CAPM formula: ri = rRF + βi x (rM - rRF); E(Ri) = rF + βi * (E[Rm] - rF)
WACC; r_WACC = rE E% + r_p P% + rD (1 - T_C) D%

Single Cash Flow Present Value: PV = C / (1 + r)n; Single Cash Flow Future Value: FVn = C * (1 + r)n
Present Value of Annuity: \[ PV = C \cdot \frac{1}{r} \left[ 1 - \frac{1}{(1 + r)^n} \right] \]; Future Value of Annuity: \[ FV = C \cdot \frac{1}{r} \left[ (1 + r)^n - 1 \right] \]

Calculators
- Allowed: HP 10B, HP 10bii, HP 10BII+, TI BAII, TI BAII Plus, and TI BAII Plus Professional calculators; or any four function calculators
- Not allowed: Graphing or Programmable calculators; iPhones with HP-10B or other emulators